

Military Unique Curricula: Instructional Objectives for Military Physicians and Graduate Medical Education Programs

Occupational and Environmental Medicine

Part I. Chemical Agents

- A. Cognitive Objectives
The resident should be able to demonstrate knowledge of the chemistry, toxicology and acute and chronic health effects of the following chemical agents
- B. Skill Objectives
The resident should be able to demonstrate the skill of:
 - 1) providing medical screening, diagnosis and treatment of exposed and/or potentially exposed individuals.
 - 2) applying or recommending exposure control measures and monitoring methods including medical surveillance.

		Academic Year		
		19 MO/DA	19 MO/DA	20 MO/DA
	Training Source			
1. Chemical warfare agents	USU MOEM Seminar ¹ M2C3 ² TCTCMSP ³			
2. Smokes & obscurants	USU MOEM Seminar			
3. Herbicides (defoliants)	USU MOEM Seminar			
4. Lead (weapons & paints)	USU MPH ⁴ USU MS-2 teaching module ⁵			
5. Petroleum products (jet fuels)	USU MPH			
6. Riot control agents	M2C3			
7. Solvents (unique to military)	TMM ⁶			
8. Fire suppressants	TMM			
9. Depleted uranium	USU MS-2 teaching module			
10. Military paints (CARC)	TMM			
11. Carbon monoxide	USU MPH			
12. Combustion products --propellants --ammunition & explosives	TMM			
13. Chemical weapons disposal and storage	TCTCMSP			

¹ Uniformed Services University Military Occupational and Environmental Seminar (1 hour weekly)

² Medical Management of Chemical Casualties Course (4 day course)

³ Toxic Chemical Training Course for Medical Support Personnel (5 day course)

⁴ Uniformed Services University Master Public Health curriculum

⁵ Uniformed Services University Second-year medical students case study

⁶ Textbook of Military Medicine

Part II Physical Agents

- A. Cognitive Objectives

The resident should be able to demonstrate knowledge of the pathophysiology and acute and chronic health effects associated with the following physical agents

B. Skill Objectives

The resident should be able to demonstrate the skill of:

- 1) providing medical screening, diagnosis and treatment of exposed and/or potentially exposed individuals.
- 2) applying or recommending exposure control measures and monitoring methods including medical surveillance.

		Academic Year		
		19 MO/DA	19 MO/DA	20 MO/DA
1.	Radiation - non-ionizing			
	--microwave	TMM		
	--lasers	TMM		
	--radio-frequency	TMM		
	--infrared	USU MOEM seminar		
2.	Radiation - ionizing			
	--nuclear weapons	Medical Effects of Ionizing Radiation course (5 days)		
	--nuclear reactors & industrial sources	USU MOEM seminar		
	--tritium	USU MOEM seminar		
	--depleted uranium	MS2 teaching module		
3.	Extreme environments			
	--heat exposure	M2C3		
	--cold exposure	USU MPH		
	--altitude	USU MPH		
	--hyperbaric environments	USU MPH		
	--space travel	USU MPH		
4.	Vibration	USU MOEM seminar		
5.	Blast overpressure	USU MOEM seminar		
6.	Noise	USU MPH		
7.	Biomechanical issues of training	USU MOEM seminar		

Part III Biological Agents

A Cognitive Objectives

The resident should be able to demonstrate knowledge of the acute and chronic diseases associated with specific biological agents.

B. Skill Objectives

The resident should be able to demonstrate the skill to:

- 1) apply appropriate epidemiologic methods of infectious disease surveillance.
- 2) use immunization prophylaxis, and other field counter-measures as appropriate to prevent infectious disease.
- 3) diagnose and treat common infectious diseases.

		Academic Year		
		19 MO/DA	19 MO/DA	20 MO/DA
1.	Epidemiology & control of military significant infectious diseases	Military Tropical Medicine course (4 week course)		
	--military immunizations	Military Tropical Medicine course		
	--travel / deployment medicine	Military Tropical Medicine course OEM Practicum rotation		
	--surveillance	Military Tropical Medicine course USU MPH		
	--outbreak investigation	Military Tropical Medicine course USU MPH		
2.	Biological warfare agents	Medical Management of Biological Casualties course (3 days)		
3.	Field environmental health	Military Tropical Medicine course USU MPH		
	--water sanitation	Military Tropical Medicine course USU MPH		
	--food procurement/preparation	Military Tropical Medicine course USU MPH		
	--waste disposal	Military Tropical Medicine course USU MPH		
	--vector control	Military Tropical Medicine course USU MPH		

Part IV. Other military occupational and environmental issues

A. Cognitive Objectives

The resident should be able to demonstrate knowledge of the topic areas.

B. Skill Objectives

The resident should be able to demonstrate the skill of:

- 1) providing medical screening, diagnosis and treatment of exposed and/or potentially exposed individuals.
- 2) applying or recommending exposure control measures and monitoring methods including medical surveillance.

Academic Year

19 MO/DA	19 MO/DA	20 MO/DA
-------------	-------------	-------------

- | | | |
|----|--|---------|
| 1. | Sleep deprivation /shift work | TMM |
| 2. | Combat stress | TMM |
| 3. | Personal protective equipment
--user fitness
--capabilities of equipment | USU MPH |

Part V. Administrative / Managerial Issues

A. Cognitive Objectives

The resident should be able to demonstrate knowledge of the topic areas.

B. Skill Objectives

The resident should be able to demonstrate the skill to:

- 1) conduct hazard assessment, estimate medical threat, and plan intervention.
- 2) manage an occupational health program in theater and in garrison.

Academic Year

19 MO/DA	19 MO/DA	20 MO/DA
-------------	-------------	-------------

- | | | |
|-----|---|------------------|
| 1. | Worksite evaluations in theater | USU MPH |
| 2. | Military medical threat estimate | USU MPH |
| 3. | Environmental health hazard assessments | USU MPH
TMM |
| 4. | Non-battle injury prevention | USU MOEM seminar |
| 5. | OOTW medical missions | USU MOEM seminar |
| 6. | Medical intelligence | USU MPH |
| 7. | Personnel Reliability Program | USU MOEM seminar |
| 8. | Radiation safety | USU MPH |
| 9. | Hearing conservation on the battlefield | TMM |
| 10. | Sight conservation on the battlefield | TMM |
| 11. | DNBI surveillance | USU MOEM seminar |
| 12. | Fitness for duty in theater | USU MOEM seminar |
| 13. | Emergency response planning | USU MPH |